

exterior of a chip card, also known as a hybrid chip card. Such a security system does not require any special medium or change to the data formatting. Accordingly, the present invention allows documents stored on existing magnetic stripe cards, as well as on the magnetic stripe of existing hybrid chip cards, to be secured and the information written thereon to be authenticated without disruption to the format of the information. The information on the document can be authenticated merely by reading the information and regenerating the Jitter Signature. A copy of the Jitter Signature may also be maintained within a central database. Thus, only if the Jitter Signature was generated by an authorized user and properly recorded in the data base will the information contained in the document be authenticated and considered valid.

#### **AMENDMENTS TO THE CLAIMS**

The following complete listing of all claims will replace all prior versions, and listings, of claims in the application. The list begins on page 3 below.

## COMPLETE LISTING OF ALL CLAIMS

**Claim 47** (Twice amended): A ~~hybrid~~ chip card with enhanced security for storing information, comprising:

- a) a memory device having data encrypted with a signature derived from a series of arbitrary spatial relationships of spatially encoded data;
- b) a medium incorporating a spatially encoded memory device, fixed to the exterior of the ~~hybrid~~ chip card, for the purpose of storing said spatially encoded data; and
- c) a processing element that uses said signature to access the encrypted data in said memory device.

**Claim 48** (Currently amended): A method for encoding a jitter signature into encoded data stored within a magnetic stripe located on a ~~hybrid~~ chip card wherein pairs of transitions are spaced apart by a non-integer multiple of a reference value, comprising the steps of:

- a) generating a jitter signature from a first portion of information stored within a magnetic stripe located on a ~~hybrid~~ chip card; and
- b) encoding said jitter signature in a second portion of the information stored within said magnetic stripe by jitter modulation, whereby said jitter modulation is accomplished by advancing or delaying the encoding timing by a small multiple of the reference value.